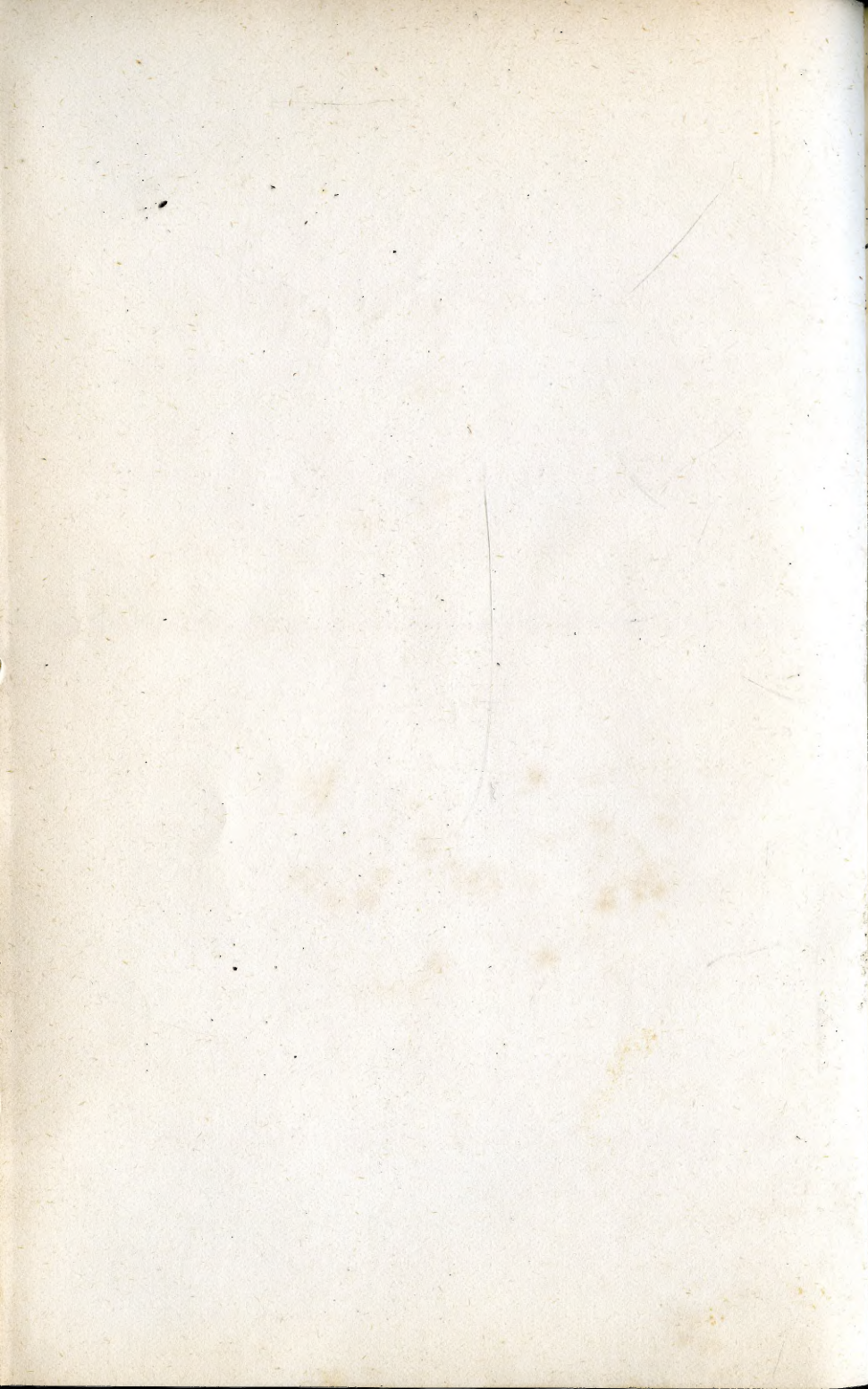




Hugh Cecil Earl of Lonsdale.

358 How to keep a Horse at a cost of £10 to £12 a year,
in fine condition to ride and drive. By **Kinard
B. Edwards**, Esq., Author of "Fowls, and
how to make them pay," etc. London. 1874.
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Part II. treats on the cultivation of profitable crops.





HOW TO KEEP

A

HORSE

At a COST of £10 to £12 A-YEAR,

IN FINE CONDITION TO RIDE AND DRIVE.

BY

KINARD B. EDWARDS, Esq.,

AUTHOR OF "FOWLS, AND HOW TO MAKE THEM PAY," &c., &c.

LONDON:

THOMAS BOSWORTH, 198, HIGH HOLBORN.

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IN THE CONDITION TO RIDE AND DRIVE.

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KINARD B. BOWARDS, Esq.

Author of "Horse and Rider's Guide to Health and Vigor."

LONDON :

THOMAS BOWARDS, Esq. 121, FLEET STREET.

THE HORSE,

AND HOW TO KEEP ONE AT A COST OF £10 TO £12 A-YEAR,

THAT horse-keeping is an expensive luxury, few I think will deny, and especially those who know what it costs to keep them in town. There is no domestic animal so commonly kept that returns so little in proportion to the cost of its keep, and there is certainly no animal kept with more unnecessary extravagance, or with less regard to economy, than the horse. Corn and hay generally form the staple, if not the entire food throughout the year, and the prices these articles command, especially in towns, make the horse one of the most expensive luxuries that can be indulged in. Feeding wholly upon corn and hay may be all very well for those who keep horses in large towns, where other food is not to be had, and it may also be indulged in by those who can afford it, whether they live in town or country, cost being of little object; but such people form a *very* small proportion of the whole community, and there are thousands upon thousands who keep horses from necessity, as well as the many who would keep them were it not for the very great expense incurred by so doing.

It is very generally believed, and broadly stated by those who keep horses in large towns, that the cost per head in corn, hay, and litter for the twelve months is not less than

3s. per day, or 54l. a-year, and I believe this cost is often exceeded in gentlemen's stables. If this unnecessary extravagance in the feeding of horses was confined to the rich and to those only who keep horses in towns and cannot help themselves, I should have little or nothing to say on the subject, for to such my remarks do not pretend to apply. But is it not a fact that this expensive system of feeding is not at all confined to those to whom I make exception, but is, to a great extent, very generally adopted by all horse-keepers, rich and poor alike, in town and country; and were it not for the extravagance so generally practised everywhere, thousands would keep horses, either for the pleasure they afford, or for business purposes, but who are now deterred from doing so owing to the great cost involved?

People of moderate means will readily admit that 54l. a-year, or even 30l., is a considerable slice to take out of a limited income, especially if it be for the pleasure of riding or driving alone, and this exclusive of the consequent and additional expenses of attendance, stabling, shoeing, taxes, &c. The consequence is that few keep horses except the rich, and those who are obliged to keep them for trade purposes; and but few, indeed, in a small way of business—however much they may require one—can afford any such outgoings.

My object in the present treatise is to show that a horse *may* be kept *at least* by those living in the country or town suburbs at about one-fourth the cost before mentioned, by following a different treatment—rational and economical—and such as shall be within the command of all who may possess a small area of garden-ground upon which to grow a certain quantity of fodder. If it can be satisfactorily shown that an average-sized horse can be kept in good working condition at a cost of from 10l. to 12l. a-year, such

information cannot fail to benefit a large section of our working community, many of whom are obliged to keep horses, but who are at the same time obliged to study economy to the utmost.

Although, as I have said, horse-keeping is an expensive luxury as commonly practised, it is equally true that a horse may, under certain circumstances, be so economically fed as to be within the reach of people of the most moderate means; and this has been proved by many who have been obliged to practise economy in this particular, and who have successfully carried out what may be called the stall-feeding and soiling system, the advantages and economy of which I am about to draw your attention to. There are of course many living in towns and elsewhere, to whom my remarks are not generally applicable, but these will form but a small proportion to those to whom my suggestions will apply in a greater or less degree.

The theory upon which I base the system I am about to recommend is this:—Firstly: If we take nature as our guide, it is clearly unnatural, and therefore unnecessary, that the food of a horse should be confined to such stimulating food as hay and corn to ensure its being in health and working condition. Secondly: The same area of ground that will be required to provide hay, to fodder a horse for twelve months, will, under arable or garden culture, raise a sufficient quantity of *esculents* as will suffice to feed six or eight horses the same length of time; or, in other words, forty square yards of cultivated ground, properly cropped, will provide keep for a horse during the twelve months, whereas one acre and a-half to two acres are required to provide sufficient hay for the same length of time. Both hay and corn are undoubtedly necessary in the feeding of a horse, but not to the extent they are generally used; they

are both costly, and should be made the auxiliary, rather than the staple food. It is well known that no horses are more liable to ailments of all kinds than those kept in gentlemen's stables, where hay, corn, beans, &c., form the sole diet. A periodical dosing or cleaning out is often necessary, to work off the effects of such high feeding.

In considering the question in its pecuniary aspect, it is perfectly clear that keeping land in pasture, either for the purpose of grazing or for making hay, is not an economical way of providing food for a horse.* Grass loses five-sixths of its weight when converted into hay; an acre of land that produces seven tons of grass, will only give one ton of hay, and whether this be grazed or converted into hay, it will be wholly insufficient to keep a horse for twelve months. Although it is true that pasture land will only raise on an average about one ton of hay, it is equally true (to quote the words of Mr. Milman) "that the capabilities of *arable* land to grow green crops is almost unlimited; it is scarcely possible to overrate the productiveness of a small area of land;" and it is by *cropping* a small plot of arable or garden land with certain esculents and artificial grasses that sufficient forage may be raised to enable you to provide the necessary fodder at a really trifling cost. Certain plants have been introduced into this country from abroad, which yield an immense weight of forage throughout the summer, suited to, and much relished by, horses.* Comfrey introduced from the Caucasus, and Lucerne, from Switzerland, are found to be the two best for this purpose; the former will yield from eighty to one hundred tons of forage to the acre, and the

* Mr. Mechi says: "To keep land in permanent grass is a mistake—nationally, almost a crime. The return from our twenty-two millions of permanent pasture is only £3 2s. per acre, while our eleven millions of arable land return £10 per acre. The land that now yields but £10 an acre is capable, under improved culture, of yielding £18 to £20 an acre."—*Mechi Balance Sheets.*

latter upwards of forty. Now, when we consider that a horse can only consume about ten tons of dry and green food in the twelve months, it is readily seen that a *very* small area of garden land will suffice to provide the necessary supply, and that something over one quarter of an acre of tillage ground laid down with these esculents, will produce as much forage, dry and green, as is obtained from six times the area of pasture land.*

The first question to be considered in dealing with this subject is, to what extent can green food be given without injuring the condition of your horse, and reducing his working power and power of endurance? The quantity that may be given with advantage must, of course, depend in a measure on the amount and description of work to be done. I know that very considerable prejudice exists amongst most horse-keepers, and especially by coachmen, grooms, and ostlers, against the use of green food for horses; it is given occasionally, generally medicinally, but seldom or ever continued for any length of time, as permanent fodder throughout the summer. It is said to make them washy, soft, pot-bellied, &c., and no doubt it has this effect upon a horse fed exclusively upon green food, and especially if it had not been used to such feeding; but I maintain beyond question that a certain quantity of green food judiciously given, forming a part, even the chief part, of the daily food of a horse throughout the greater part of the year, is the

* Mr. Mechi, in proof of the expense of providing pasture for horses, says: "My horses require two to two and a-half acres per horse, and some of my neighbours' horses consume five acres, some more, during the twelve months. On some farms that I know of, ten acres would hardly keep a horse. This brings us to consider the imperious necessity and advantage of forcing from the land its utmost possible development. Those who watch the discrepant productions of *three tons* and fifty tons can at once apply my observations."—*Mechi* ("How to Farm Profitably.")

best feeding that can be given, and will have none of the bad effects complained of.

Let us for a moment look to nature, which is admitted to be a safe guide in most things, and why not so in considering the proper treatment of the horse? Green food (grass) is clearly the food provided by nature to sustain the horse, and the formation of his hoof, and swiftness in a state of nature, is proof that upon that food he will be able to combine speed with endurance. In my travels through South America I had every opportunity of testing this question in a practical manner, and I quite satisfied myself as to the effect of green food upon horses living almost in a state of nature. In that country where horses are bred in herds, in much the same way that horned cattle are bred here, any feeding except grass is unknown, and I speak from experience when I say that no horses in this country, however they may be fed, are capable of enduring the fatigue of a long journey better than they are. I have myself on more than one occasion ridden on the saddle from sixty to seventy miles in one day, the "guacho," or attendant, driving a herd of thirty or forty horses in front for the entire journey, these being driven for the purpose of change. The whole journey is performed at a hand gallop; and I was informed that 100 and 120 miles at a stretch are not of uncommon occurrence. The journey is, of course, across the grass plains, and not over roads; the horses are unshod, and know of no other food except grass. I just mention this fact to show that there is nothing in green food to make a horse useless for work, as is commonly supposed; but, on the other hand, I am far from saying that a horse fed solely on grass can compete with one, in the long or short run, that is either fed wholly upon hay and corn, or upon what I maintain to be the test of all feeding—a proper proportion

of hard and soft food. As I, however, said before, it is not my intention to advocate grass (pasture) in any shape as fodder, inasmuch as it is far from being economical, and comparatively few people have the command of an acre or two of pasture to devote to this purpose, and still less can they afford to purchase hay and corn at retail prices. A horse, if he is to be constantly used, and expected to work with any spirit, will undoubtedly require something more than green food, and something of a stronger and more binding character; green food must form part of the whole, and the whole, and each part, must be constantly varied, to obtain the best results.

Although but few people, as I say, may be able to command an acre or two of pasture for the use of their horses, even supposing it were desirable, there are comparatively few, I think, living in the country or town suburbs, who cannot command a small plot of garden ground, say thirty to forty yards square, and it is to those who can command such a patch that I say "You can keep a horse at a cost of £10 to £12 a-year in good condition to ride and drive."

We now come to the all-important point of how to cultivate this plot to the best advantage, as well as generally to consider the necessary quantity of corn and hay that will be required, and the estimated cost of £10 to £12 a-year.

I will now take it for granted that the proposed horse-keeper is possessed of at least one-third of an acre of ground (about forty yards square) upon which to grow his crops, and point out how it may be most advantageously cropped for the purpose to which it is intended to devote it. Of the many crops that may be cultivated for the purpose, Comfrey and Lucerne, as I have said, are, perhaps, the two

best; both plants are of most luxuriant growth, and afford an abundance of forage throughout nine months of the year, much relished by horses, and upon which they are found to thrive and do well.* The former is only used in a green state; it is fattening, and less flatulent and softening than tares or clover, and horses are found to work better on it than on other green food. It is very hardy, will grow on any soil, comes in earlier, and lasts longer than any other green crop, and affords a greater weight of forage per acre, and when once planted it will last for ever.† Lucerne is better known in this country, having been in use and established with us for many years; it is also very largely used and highly prized on the Continent as food for horses. It may either be used green, or it may be converted into excellent hay. It will continue in the ground unimpaired for seven to ten years.‡ Of the root crops either

* Mr. Mechi says, "I object *in toto* to permanent pasture, as a positive individual and national loss. Lucerne and sainfoin are my favourites, and you can grow them anywhere if you keep it clean, supply it amply with lime drain (where necessary) very deep, and protect it from frost in winter by a strong coating of manure, with a dust of guano in summer. Tares (vetches) and rye are also profitable. All these will grow on *any* land, however boggy, sandy, or gravelly, if thoroughly drained, properly manured, and deeply cultivated."

† I have lately received a letter from a neighbour who grows Comfrey largely, and in it he says, "I have fed three cows and two horses during the past summer on the produce of three-quarters of an acre of Comfrey." My own experience of the valuable plant is that it will produce double the quantity of fodder that can be raised from any other plant known, not excepting Lucerne, which probably comes next. 2,000 plants or small cuttings, that I planted three feet apart early this spring, produced during the following nine months upwards of 50 tons of forage to the acre, and I am confident that next year I shall obtain up to 80 tons. The Bishop of Kildare, who grew it largely at Glasnevin, when asked what produce it would give, replied, "Sir, it will produce 300 tons to the acre." The Rev. Henry M——, who grew it, obtained from three cuttings upwards of 82 tons. (*Hollier*.) Martin Doyle speaks of it highly, and states that its weight per acre is fabulous.

‡ In Stephen's "Book of the Farm" he writes as follows: "The quick progress of Lucerne, when it has room, is remarkable; the first year only two tons—the second, eight tons—the third, thirty-two tons at four cuttings."

carrots, parsnips, or mangolds may be grown, all of which are excellent winter keep for the horse. One-third of the area to be set apart may be laid down with Comfrey, and one-third with Lucerne, and one-third retained for either carrots, parsnips, or mangolds, or for a few of each of them. This will allow thirty-six perches for the soiling crops, and seventeen perches for the root crops. Allowing from the soiling crops an average yield of sixty tons to the acre, thirty-six perches will give upwards of fourteen tons of forage, and allow thirty-six tons to the acre for the root crop, and we have seven tons, or a total of twenty-one tons, raised on a plot of ground forty yards square. Now suppose a horse to consume eight tons of such food in the twelve months, we have a large margin to allow for the loss of weight in converting a certain quantity of the Lucerne into hay. Carrots are well known to be excellent for horses, but mangolds are little known and seldom used for this purpose; nevertheless, they are excellent and very economical, used in moderation, and not much inferior to the highly-prized carrot.* Mangolds can usually be purchased for about one-half the price of carrots, and can be obtained in places where carrots are not to be had at any price. The quantity of green food, such as Comfrey and Lucerne, that

Lucerne is fit for cutting a fortnight to three weeks earlier than rye-grass or clover. Under the head of "Sainfoin" he writes: "Three or more good cuttings may be obtained, amounting to seven or eight tons of prime hay, or thirty tons of green fodder. It makes the finest quality of hay; the same has fattened sheep fed on it alone, which thrived faster than others fed at the same time with peas and oats." Sir John Sinclair says: "It is one of the most valuable herbage plants we owe to the bounty of Providence."

* Mr. Meehi, who had considerable experience in the use of mangolds for horses, speaks most highly of them, and found that they in a great measure dispensed with the necessity of hay, their condition being first-rate and health excellent. The analysis of the mangold shows that it possesses the elements necessary for the formation of bone and muscle to an unusual degree, and more than in other root or green crops.

an average-sized horse will consume in the twenty-four hours, supposing no other food be given, may be set down at 60 lbs, and the same horse would probably consume 25 lbs. to 30 lbs. of dry food, such as corn, hay, and straw chaff. The total quantity of food, therefore, that should be given to a horse daily will be in proportion to the description given, and will vary according to circumstances and the work to be done. It must be remembered that a horse has a very small stomach; the digestion, however, is very rapid; to make up for this smallness in size, the food should be administered in small quantities at a time, and frequently given.

We now come to the question of corn. Although I have said before corn and hay in any great quantity is not essential in the feeding of a horse, a certain quantity however, is necessary, and must be given daily, partly to counteract the laxative tendencies of the softer green food, as well as to keep up the spirit and enduring power of the animal, and this especially when a horse is required to work hard and go at any speed.

Other grain except oats is seldom given to a horse. Indian corn, however, is excellent, and more economical; and buckwheat* may also be substituted for a change. As variety has been found to be an important element in the feeding of all stock, so is it with the horse. Taking one season against another throughout the year, it will be found that an average allowance of 5 lbs. weight of grain per day

* Buckwheat is a very profitable crop to grow, and the grain is much used abroad to feed horses and poultry. I have on two successive years obtained (without manure) over forty bushels to the acre, on poor sandy soil that would not have produced eighteen bushels of oats. It is planted the same time as swedes, and comes to harvest shortly after wheat harvest. The straw is excellent to chaff up for horses; it may also be cut green to soil from, as Comfrey and Lucerne.

(over one bushel per week) is sufficient for any ordinary-sized horse. If we take the average price of grain at a trifle less than 1d. per lb., this will entail a cost of 4d. per day, or £6 2s. a-year, leaving, say, £3 to £4 for the rent of the plot of ground, and £2 for any straw that may be required to chaff up and consume with the hay and roots during the three winter months. It will, therefore, be seen that £10 to £12 is sufficient to cover all cost, so far as food is concerned, and this without stint in any way. There is another article that may be used with very great advantage where it is to be procured, and that is furze or gorse. This is a most valuable and economical food for horses during the winter months, when all kinds of keep are short, and expensive to purchase.* Horses are found to do remarkably well on furze, and are said to look better in the coat and more sleek than when fed on any other food. In very many places furze can be cut in any quantity from commons and waste places, at no cost whatever beyond the cost of cutting, and ten minutes will suffice to bruise sufficient to supply an animal for twenty-four hours. Full particulars of the culture of this plant will be found in Part II. of this treatise.

Comfrey and Lucerne will both be ready to soil from early in April (indeed, my Comfrey is at this moment, 25th March, in full leaf and ready to cut), at which time the roots should be gradually discontinued, and replaced by either one or the other of these crops. The soiling from these green crops

* Although I have only mentioned Comfrey and Lucerne, there are many other esculents and artificial grasses that may be cultivated with advantage for the purpose of soiling from. Sainfoin, which makes *the best of all hay*, Italian rye-grass, clover, tares, rape, &c.,—all these are valuable in their way and yield very heavy crops, and afford an endless variety as change of food for all stock. Full particulars of the cultivation of these several plants will be found in the Second Part of this treatise.

may be continued until late in November, at which time all growth is suspended, and it will then be necessary during the next four (winter) months to depend wholly upon hay, straw, corn, and roots. Where several horses are kept, it will undoubtedly pay well to resort to that which has been found to be by far the best and most economical way to administer all food to horses, and that is feeding upon chaffed food. A certain quantity of hay and straw should be chaffed up and mixed through the chaffed green food, and the bruised oats, or Indian corn meal, may be also added, the whole being mixed together. It is found that a horse will consume chaffed food in a much shorter space of time than when unchaffed, and there is consequently more time for rest—a very important consideration with horses that are much out of the stable at work. There is also the advantage of being able to consume a certain quantity of straw, and which the horse would refuse to eat in any other way. Administering chaffed food undoubtedly entails extra labour, and, as I have before said, it cannot be advantageously practised except where several horses are kept, and two hands at hand to cut the chaff.*

In winter, when roots have to take the place of green food, chaffing becomes all the more essential. After the mangolds or swedes are passed through a pulping-machine, they must be mixed with chaffed hay and straw; otherwise they would prove washy, and too cold to the stomach,

* A chaff-cutter and pulping machine may be very economically worked by a small turbine wheel, by which much labour may be economised, if not dispensed with altogether. There is no house having anything of a supply of running water that should be without one of these wonderful little wheels. They can be put up at a very trifling cost in the corner of any shed or out-house, and can be used to turn a lathe, circular saw for cutting wood, pulping or slicing roots, chaffing hay, straw, cleaning and grinding knives, scythes, &c. A small 3-inch pipe of water, with a good fall, will give the requisite power. They only require to be better known, I think, to be more generally used.

unless given in very small quantities, as is generally the case with carrots.*

Although chaffing should be carried out when practicable, it is not a *sine quâ non* in the soiling system, and where only one horse is kept it will be seldom found practicable, as the chaffing involves cost and labour, two hands being necessary. I do not myself chaff my green crops, but give them as they are cut and carried from the field, a small quantity of hay being given twice or three times a-day after the green food, regulating the quantity of the latter by the state of the excrements and general appearance of the horse, and more particularly regulating the quantity of hay and corn by the work the animal is doing at the time. There is really no practical difficulty whatever in carrying out the system here advocated, and it will undoubtedly prove the most economical that can be practised, and adapt itself to the circumstances of those who really desire to study economy. After you have once laid down your crops, and they become established in the ground (being perennial), there is little or no labour or expense afterwards, beyond periodically manuring the ground, and keeping it free from weeds. The manure that is made from the crops consumed should be annually returned to the soil, and this will be sufficient to keep your land in high cultivation,† provided it was in good heart when laid down.

* Mangolds should not be drawn from the field and given in a frost or too cold a state. They should be stored in some confined place, to reduce their temperature before use; otherwise there will be fear of griping. This especially applies when they are given whole and unmixed with chaff.

† It is of the utmost importance that all manure made, liquid or otherwise, should be stored until used in such a way as to convert the whole as far as possible into a semi-liquid state. The most valuable properties of manure (carbonic acid and ammonia) are stored and preserved by the liquid element being present, and prevented from taking flight and being lost in the atmosphere, which is the case with all manure that is exposed and allowed to dry.

Many will think, at first sight, this treatment will involve considerable labour, but in practice it will not be found to do so, when once the system is understood and systematically carried out. It will, of course, be necessary that the cultivated patch should be within easy reach of the stable; if it be directly adjoining, the forage may be cut with a common field-hook and carried in by the boy under his arm, say twice-a-day; but if the ground be at a greater distance, a wheel-barrow will be the more convenient way of carrying. In either case the labour of cutting and carrying is only the question of five minutes in the day, and it will take this time to cut the usual quantity of hay from a rick where soiling is not practised. As I have said before, and I again repeat it, a horse fed as I have described will be fit for any ordinary work, either to hack, drive in a carriage, do cart-work or light field-work; but such feeding does not profess to keep a horse in such condition as to fit him for the hunting-field, or for fast carriage-work in town, or severe farm-work; *such* can only be performed by horses fed upon an unlimited quantity of corn and the best hay; but for such work as *nineteen horses out of twenty are required to do*, mixed feeding, such as I have described, will be found all that is necessary, and a horse so fed will be found far more healthy, and as well able to perform all ordinary work as when fed upon four times the quantity of hay and corn, and possibly at four times the cost.

FINIS TO PART I.

PART II. treats on the Cultivation of Comfrey, Lucerne, Sainfoin, Italian Rye Grass, Vetches, Furze, Clover, Mangolds, Swedes, Potatoes, Parsnips, Carrots, &c., and other profitable crops to grow.

. SEE ADVERTISEMENT ON BACK OF COVER.



